AMENDMENTS TO THE CLAIMS

- 1. (Original) A method of changing the sensory perception of an animal, wherein the method comprises administering to the inner ear an expression vector comprising a nucleic acid sequence encoding an atonal-associated factor, wherein the nucleic acid sequence is expressed to produce the atonal-associated factor resulting in generation of sensory hair cells that allow perception of stimuli in the inner ear.
 - 2. (Original) The method of claim 1, wherein the animal is a human.
- 3. (Currently Amended) The method of claim 1 or claim 2, wherein the atonal-associated factor is a β -helix-loop-helix transcription factor.
- 4. (Original) The method of claim 3, wherein the β -helix-loop-helix transcription factor is MATH1.
- 5. (Original) The method of claim 3, wherein the β -helix-loop-helix transcription factor is HATH1.
- 6. (Currently Amended) The method of <u>claim 1</u> any of claims 1-5, wherein the expression vector is a viral vector.
- 7. (Original) The method of claim 6, wherein the viral vector is an adenoassociated viral vector.
- 8. (Original) The method of claim 6, wherein the viral vector is an adenoviral vector.
- 9. (Original) The method of claim 8, wherein the adenoviral vector is replication deficient.

- 10. (Currently Amended) The method of elaim 8 or claim 9, wherein the adenoviral vector comprises an adenoviral genome having a deficiency in at least one replication-essential gene function of the E1 region.
- 11. (Currently Amended) The method of <u>claim 10</u> any of claims 8-10, wherein the adenoviral vector comprises an adenoviral genome having a deficiency in at least one replication-essential gene function of the E4 region.
- 12. (Original) The method of claim 11, wherein the adenoviral vector comprises a spacer in the E4 region.
- 13. (Currently Amended) The method of <u>claim 1</u> any of claims 1-12, wherein the method further comprises administering to the inner ear a viral vector comprising a nucleic acid sequence encoding a neurotrophic agent.
- 14. (Original) The method of claim 13, wherein the viral vector comprising the nucleic acid sequence encoding the atonal-associated factor and the viral vector comprising the nucleic acid sequence encoding the neurotrophic agent are the same viral vector.
- 15. (Currently Amended) The method of claim 13 or claim 14, wherein the neurotrophic agent is a tumor growth factor, brain-derived neurotrophic factor, or nerve growth factor.
- 16. (Currently Amended) The method of <u>claim 1</u> any of claims 1-15, wherein a disorder caused by a defect or loss of sensory hair cells is treated therapeutically or prophylactically.
 - 17. (Original) The method of claim 16, wherein the disorder is hearing loss.
 - 18. (Original) The method of claim 16, wherein the disorder is a balance disorder.

- 19. (Currently Amended) The method of <u>claim 1</u> any of claims 1-18, wherein sensory hair cells are generated from adult differentiated cells of the inner ear.
- 20. (Currently Amended) The method of <u>claim 1</u> any of claims 1-19, wherein sensory hair cells are generated in scarred epithelia of the inner ear.
- 21. (Currently Amended) The method of <u>claim 1</u> any of claims 1-20, wherein the <u>expression viral</u> vector further comprises a moiety that binds a receptor of scarred epithelial cells and that facilitates transduction of scarred epithelial cells by the expression vector.
- 22. (Original) A method of generating a hair cell in differentiated sensory epithelia *in vivo*, wherein the method comprises contacting differentiated sensory epithelial cells with an adenoviral vector (a) comprising an adenoviral genome deficient in one or more replication-essential gene functions of the E1 region, the E4 region, and, optionally, the E3 region (b) comprising a spacer in the E4 region, and (c) comprising a nucleic acid sequence encoding an atonal-associated factor, wherein the nucleic acid sequence is expressed to produce the atonal-associated factor such that a hair cell is generated.
- 23. (Original) The method of claim 22, wherein all or part of the E3 region of the adenoviral genome of the adenoviral vector is removed.
- 24. (Currently Amended) The method of claim 22 or claim 23, wherein the differentiated sensory epithelial cells are located in an ear.
- 25. (Original) The method of claim 24, wherein a dose of adenoviral vector is administered to the ear in a single injection.
- 26. (Original) The method of claim 24, wherein multiple doses of adenoviral vector are administered to the ear.

- 27. (Original) An adenoviral vector having a deficiency in at least one replicationessential gene function of the E4 region of the adenoviral genome and a nucleic acid sequence coding for an atonal-associated factor.
- 28. (Original) The adenoviral vector of claim 27, wherein the adenoviral genome is further deficient in at least one replication-essential gene function of the E1 region of the adenoviral genome.
- 29. (Currently Amended) The adenoviral vector of claim 27 or claim 28, wherein the adenoviral genome lacks the entire E4 region of the adenoviral genome.
- 30. (Original) The adenoviral vector of claim 29, wherein the E4 region of the adenoviral genome has been replaced with a spacer element having at least 15 base pairs.
- 31. (Currently Amended) The adenoviral vector of <u>claim 27</u> any of claims 27-30, wherein the atonal-associated factor is MATH1.
- 32. (Currently Amended) The adenoviral vector of <u>claim 27</u> any of <u>claims 27-30</u>, wherein the atonal-associated factor is HATH1.
- 33. (Currently Amended) The adenoviral vector of <u>claim 27</u> any of <u>claims 27-32</u>, wherein the adenoviral vector further comprises a neurotrophic agent.
- 34. (Currently Amended) A replication competent adenovirus-free composition comprising the adenoviral vector of <u>claim 27</u> any of claims 27-33 and a pharmaceutically acceptable carrier.

This listing of claims replaces all prior versions, and listings, of claims in the application.